

Vulnerability Analysis Methodology

Loss estimated provided herein uses available data and applicable methodologies that result in an approximation of risk. These estimates should be used to understand relative risk from hazards and potential losses. Uncertainties are inherent in any loss estimation methodology, arising in part from incomplete scientific knowledge concerning natural hazards and their effects on the built environment. Numerous uncertainties also result from approximation and simplifications that are necessary for a comprehensive analysis these may include incomplete inventories, demographic, economic parameters, or lack of data. A basic synopsis of the methodology utilized to meet the requirements in DMA 2000 is discussed here with a more detailed discussion in each hazard section.

Geographic Information System (GIS) software was used as the basic analysis tool to complete the hazard analysis in all seven multi-jurisdictional plans and the state plan. For most hazards, a comparison was made between available digital hazard data and census 2000 demographic information as well as LandScan data that takes into account the 2000 population estimates to provide daytime and nighttime population density estimates. Statewide digital data was obtained from Utah's Automated Geographic Reference Center (AGRC). Hazards data was provided by UGS (landslide), Department of the Interior (wildfire), and Bureau of Land Management (wildfire and dams). The AGRC also provided data on other hazards and infrastructure from their shapefile databases.

Earthquake

Earthquake loss and vulnerability was profiled using HAZUS MH, which is shorthand for Hazards United States. The HAZUS MH Earthquake Model is designed to produce loss estimates for use by federal, state, regional and local governments in planning for earthquake risk mitigation, emergency preparedness, response and recovery. The methodology deals with nearly all aspects of the built environment, and a wide range of different types of losses.

Extensive national databases are embedded within HAZUS MH, containing information such as demographic aspects of the population in a study region, square footage for different occupancies of buildings, and numbers and locations of bridges. Embedded parameters have been included as needed. Using this information, users can carry out general loss estimates for a region. The HAZUS MH methodology and software are flexible enough so that locally developed inventories and other data that more accurately reflect the local environment can be substituted, resulting in increased accuracy. The HAZUS MH methodology and software are robust enough that locally-developed databases are allowed to be substituted into the software. This provides a local jurisdiction with the means to develop a more accurate estimation of their risk to earthquake and the subsequent losses.

Uncertainties are inherent in any loss estimation methodology. They arise in part from incomplete scientific knowledge concerning earthquakes and their effects upon buildings and facilities. They also result from the approximations and simplifications that are necessary for comprehensive analyses. Incomplete or inaccurate inventories of the built environment, demographics and economic parameters add to the uncertainty. These factors can result in a

range of uncertainty in loss estimates produced by the HAZUS MH Earthquake Model, possibly at best a factor of two or more.

Dam Failure

Analyses of the total area per county susceptible to dam failure inundation were conducted. State dams and inundation areas for 2010 were provided by the AGRC and federal dams and inundation areas for 2010 were provided by the U.S. Bureau of Reclamation (BOR). The BOR dam inundation data, however, was not mapped due to security risks.

The BOR and state dam failure inundation areas were clipped from each Utah county. The “calculate geometry” function in ArcView 9.3 was then used to calculate the total area of potential dam failure inundation areas. The BOR data provides various dam failure scenarios, such as sudden failure and sunny day failure. The highest potential inundation area was used for each listed BOR dam as to prevent overlapping and multiple summations of BOR dam inundation areas.

The percent total potential inundation areas per county were also calculated to demonstrate how much area per county is at risk to dam failure inundations. This was calculated by dividing the total area of the county by the total potential dam failure inundation area of the county. It is important to note that maps were also created in ArcView 9.3 that visualize this distribution of potential dam failure inundation risk areas per county, and that many of these areas border and intersect population clusters.

The number of people per three arc-seconds (approximately 90m x 70m area) within either a high hazard state or federal dam failure inundation area was calculated to help estimate the possible number of people that could be affected by dam failure inundation. The “select by location” feature found in the ArcView 9.3 software package was used to determine how many people were located within a high hazard dam failure inundation area. LandScan provided population location data for daytime and nighttime hours and the AGRC and Bureau of Reclamation provided dam inundation data. The Landscan data set was derived by the Oak Ridge National Laboratory utilizing a combination of information such as 2000 census data, proximity of population to roads, slopes, land cover, night-time lights, and other information that is then apportioned to each three second arc-second grid areas. An arc-second is a measure of latitude and longitude used by geographers that equates to approximately 90 meters by 70 meters within the state of Utah. It is important to note that when working with population density data points, a 90m X 70m resolution is at a finer scale than census block data.

In addition, areas that lie within both state and federal high hazard dam failure inundation areas were identified so that populations within these overlapping areas were only counted once. Analyses were also conducted on potential loss to state facilities located in dam inundation areas. Using the “select by attribute” option under the ArcView 9.3 selection toolbar, state facilities within state BOR inundation areas were located, mapped, and the current value of the facilities were summed to estimate potential loss of facilities per county.

Drought

Drought vulnerability rankings are based solely on agricultural information, typically the economic sector hit hardest by a drought. For the 2008 SHMP updated, economic indicators include cash receipts per county from 2004 to 2005, personal income from farming for 2002, number of acres of farmland per county, number of acres of cropland per county, and number of cattle per county were used to determine a counties vulnerability to drought. These scores were all normalized and added together to create a vulnerability rating with higher numbers having higher vulnerability.

Drought is a compounding event, with economic losses getting larger as drought conditions persist. Yearly levels of snow pack, precipitation, and water storage from 2005 – 2010 have varied but severe drought conditions have not returned. Utah may experience dryer than average conditions to moderate drought conditions in the near future.

Flood

Utah has significantly improved in evaluating the states vulnerability to flooding. Utah's successful Risk MAP Program has proven an essential element in updating Utah's Flood Insurance Rate Maps (FIRMS) and Flood Insurance Studies (FIS). Utah's Risk MAP Program encourages state and local governments to analyze vulnerability based on local flood risk assessments.

The Risk MAP Program has provides the state and local governments the ability assess their vulnerability using digitized flood maps. The digitized flood maps also provide a more accurate planning tool for future development in their jurisdiction as well has used to identify jurisdictions most threatened and vulnerable to flood damages. Utah currently has eight counties with digital FIRMS and seven counties with digital FIRMS in production.

Utah's Risk MAP program is FEMA's vision to integrate all three legs of the NFIP, as well as the interrelationship to the key elements of the disaster programs; PA, Mitigation Planning and Grant Programs. This will create opportunities for synergy with our state and local partners in a manner that streamlines multiple activities and builds state and local capability, which essential for the continued investment in better flood maps and to be cost effective. Utah feels that every community should receive quality maps and mapping partners is essential to be successful in this program.

Utah's Risk MAP program will provide opportunities from mapping events and tools to tie risk identification and risk assessments to feed planning within communities to then develop long term solutions to reduce the risk. PA funding provides long term mitigation opportunity to utilize the risk mapping, assessment and planning approaches to coordinate mapping efforts in Utah. These opportunities are abound for integration and cost savings. Additional information Utah's Risk MAP, how it's managed, status of flood mapping updates and Utah's floodplain mapping successes, is available in Appendix D, Flood Mapping and Floodplain Programs.

Between 2008 and 2010, flood insurance claims increased by nine percent and total flood loss payments increased by \$800,000.00. (*Figure 1-23, NFIP Flood Insurance Statistics 1978-2010*). FEMA has identified six Repetitive Loss Structures (RLS) in Utah and no Severe Repetitive Loss

Structures in Utah (SRL). More information of RLS is available in Appendix D, Floodplain Mapping and Floodplain Program. Due to the small number of RLS, there was no analysis to determine a strategy to address RLS in Utah. Additional information Utah's National Flood Insurance (NFIP), Community Assistance Program (CAP), is available in Appendix D, Flood Mapping and Floodplain Programs

To determined flood vulnerability for each jurisdiction, state floodplain experts were assembled to provide a qualitative vulnerability assessment, classifying each county into a high, medium, or low flood vulnerability rating. Experts included the State Flood Plain Manager, State Hazard Mitigation Officer, the U.S. Army Corps of Engineers, and members of the State Hazard Mitigation Team. Classifications were based on population, in-place flood mitigation, age and accuracy of NFIP maps, dollar amounts of infrastructure values from HAZUS MH, past flood loss, and the potential for future flooding as a result of development pressure.

Wildfire

Analyses of the total area per county susceptible wildfire were conducted using wildfire and state facility data provided by the Bureau of Land Management and the US Department of the Interior through the AGRC. The Oak Ridge National Laboratory provided the Landscan2005 data.

Analyses pertaining to the total area of land per county susceptible were first conducted. Layer files of locations classified as high or extreme wildfire areas were constructed using the "select by attribute" option in ArcView 9.3. Using the "geometry calculator" selection in the attribute table, the total amount of square miles per county susceptible to wildfire were calculated and mapped.

Analyses were also conducted on potential loss to state facilities located in high and extreme wildfire risk areas. Using the "select by attribute" option under the ArcView 9.3 selection toolbar, state facilities within high and extreme wildfire risk areas were located, mapped, and the current value of the faculties were summed to estimate potential loss of facilities per county.

Landsan data was used to determine how many people are within high and extreme wildland fire risk areas in each county. The Landsan data set was derived by the Oak Ridge National Laboratory utilizing a combination of information such as 2000 census data, proximity of population to roads, slopes, land cover, night-time lights, and other information that is then apportioned to each three second arc-second grid areas. An arc-second is a measure of latitude and longitude used by geographers that equates to approximately 90 meters by 70 meters in area within the state of Utah. It is important to note that when working with population density data points, a 90m X 70m resolution is at a finer scale than census block data. Analyses of how many people per county are located in high and extreme wildfire risk areas were calculated by utilizing the "select by location" option under the ArcView 9.2 selection toolbar. The locations of people in relation to high and extreme wildfire risk areas were than mapped for each county and ranked.

Landslide

Similar to analyses were conducted on wildfire and dam failure inundation hazards, the total amount of land area in each county susceptible to landslides. The Utah Geological Survey provided 2007 Landslide data for this analysis.

Analyses pertaining to the total area of land per county susceptible to landslides were first conducted. Layer files of locations classified as having a high landslide potential were constructed using the “select by attribute” option in ArcView 9.3. Using the “geometry calculator” selection in the attribute table, the total amount of square miles per county susceptible to landslides were calculated and mapped. Potential loss to state facilities located in high and extreme wildfire risk areas were then identified. Using the “select by attribute” option under the ArcView 9.3 selection toolbar, state facilities within high or moderate landslide risk areas were located, mapped, and the current value of the facilities were summed to estimate potential loss of facilities per county.

Population density and location data was provided by the LandScan dataset. The Landscan data set was derived by the Oak Ridge National Laboratory utilizing a combination of information such as 2000 census data, proximity of population to roads, slopes, land cover, night-time lights, and other information that is then apportioned to each three second arc-second grid areas. An arc-second is a measure of latitude and longitude used by geographers that equates to approximately 90 meters by 70 meters in area within the state of Utah. It is important to note that when working with population density data points, a 90m X 70m resolution is at a finer scale than census block data.

Landscan data was used to determine how many people are within high and moderate landslide susceptible area for both daytime and night-time hours. This was completed by utilizing the “select by location” option under the ArcView 9.2 selection toolbar. The locations of people in relation to the location of high or moderate landslide risk areas were then mapped and summed up for each Utah County.

State Owned Facilities

One of the requirements in DMA 2000 is to assess the state owned facilities and there potential vulnerability to particular hazards. Utah Risk Management provided a geocoded list of state-owned facilities and their total current use value. The shapefile used for analyses pertaining to vulnerability of state facilities includes 6,736 facilities.

Table I-5 - 2010 State Owned Facilities and Their Current Values

County Name	Count	Insured Value
Beaver	43	\$59,658,705
Box Elder	135	\$384,071,542
Cache	586	\$1,520,883,525
Carbon	135	\$208,266,895
Daggett	29	\$15,121,339
Davis	352	\$1,473,229,390
Duchesne	102	\$162,843,693
Emery	111	\$111,498,739
Garfield	75	\$56,085,456
Grand	79	\$49,168,990
Iron	230	\$542,074,952
Juab	73	\$86,657,955
Kane	71	\$59,766,836
Millard	85	\$151,693,827
Morgan	67	\$71,260,550
Piute	24	\$17,118,968
Rich	63	\$22,581,600
Salt Lake	2221	\$9,243,977,141
San Juan	104	\$155,374,819
Sanpete	189	\$400,181,595
Sevier	127	\$194,770,108
Summit	143	\$286,656,757
Tooele	94	\$325,264,444
Uintah	131	\$232,447,687
Utah	625	\$2,874,167,305
Wasatch	156	\$178,608,368
Washington	252	\$814,071,164
Wayne	36	\$17,077,394
Weber	398	\$1,595,063,587
OVERALL TOTAL	6736	\$21,309,643,331

Provided in Table I-6 is a breakdown by county of the total estimated dollar value exposed natural hazards. This information was derived using HAZUS-MH. Estimated dollar values are provided in millions for the key occupancies classes in Utah along with the number of response facilities, schools, and hospitals.

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Table I-6 Total Estimated Exposed Value Per County

County Name	Residential in Millions	Non-Residential in Millions	Schools & Hospitals	Emergency Response Facilities	Total Building Value in Millions
Beaver	\$297	\$35	7	3	\$333
Box Elder	\$1,730	\$255	29	12	\$1,985
Cache	\$3,411	\$801	33	11	\$4,212
Carbon	\$983	\$149	15	9	\$1,132
Daggett	\$83	\$4	3	3	\$88
Davis	\$10,276	\$1,628	94	36	\$11,905
Duchesne	\$628	\$152	17	3	\$780
Emery	\$441	\$84	10	11	\$526
Garfield	\$311	\$76	11	3	\$387
Grand	\$386	\$89	7	5	\$476
Iron	\$1,469	\$317	15	7	\$1,786
Juab	\$320	\$65	7	4	\$386
Kane	\$388	\$62	8	5	\$451
Millard	\$504	\$95	14	7	\$599
Morgan	\$302	\$67	3	3	\$369
Piute	\$83	\$12	3	1	\$96
Rich	\$246	\$10	4	5	\$257
Salt Lake	\$40,368	\$10,496	306	48	\$50,865
San Juan	\$527	\$82	15	8	\$609
Sanpete	\$893	\$162	15	6	\$1,055
Sevier	\$821	\$154	18	5	\$976
Summit	\$2,601	\$378	16	4	\$2,980
Tooele	\$1,802	\$231	23	11	\$2,034
Uintah	\$955	\$544	11	6	\$1,199
Utah	\$13,600	\$2,712	130	28	\$16,313
Wasatch	\$860	\$111	7	3	\$972
Washington	\$4,144	\$853	34	10	\$4,997
Wayne	\$148	\$19	1	1	\$168
Weber	\$8,798	\$1,566	80	16	\$10,365

This ranking list of counties is based on the total building values in Table I-6:

1. Salt Lake	11. Uintah	21. Kane
2. Utah	12. Carbon	22. Garfield
3. Davis	13. Sanpete	23. Juab
4. Weber	14. Sevier	24. Morgan
5. Washington	15. Wasatch	25. Beaver
6. Cache	16. Duchesne	26. Rich
7. Summit	17. San Juan	27. Wayne
8. Tooele	18. Millard	28. Piute
9. Box Elder	19. Emery	29. Daggett
10. Iron	20. Grand	

Estimated Insured Value of State Owned Facilities

For the purpose of estimating potential loss to state owned facilities due to wildfire, landslides, and dam inundation, a state facilities data set was provided by the AGRC. This data set represents 6,736 facilities in the state of Utah that are controlled by the state or by entities of the state of Utah. This number is a great improvement of the data used in the first assessment, which included approximately 1000 facilities and about 1,000 more than the last assessment. The dataset was overlaid with the wildfire, landslide, and dam inundation areas to determine how many facilities are vulnerable to these specific natural disasters.

Changes in Development on Lost Estimates

The updated SHMP map section has been greatly updated from the original plan. This current plan includes updates, improvements, and additions to the maps section. Better and updated shape files were available for the 2010 update. Landscan data was used to identify population used in the maps and risk analyses. This allows us to have a better understanding of the lost estimates for Wildfire, Dam Failures and Landslides.

Limitations

Challenges in conducting hazard identification and impact analyses include lack of data availability, lack of current and frequently updated data, and insufficient tools available to conduct detailed and thorough analyses. The following items would be useful in future planning processes:

- Available and updated County Assessor data from all 29 counties.
- A better method and model that can be used in predicting future losses.
- Funding

Future analysis

Advances in GIS data and analysis methods are starting to be use by state agencies. In the future mitigation plans and revisions will include:

- Detailed state owned facilities loss information
- Potential avalanche slopes
- More detailed local specific wildfire loss information.
- Data and methodology to address potential social vulnerability issues in disasters.

Hazard Analysis Matrix

The following all-hazards analysis matrix and all-hazard consequence and impact analysis matrix show the vulnerability to a hazard. The matrix uses the risk factor and potential damage to equate the total vulnerability of a hazard. This matrix also identifies technological and man-made hazards

To equate the risk factor (RF) the matrix uses the probability (P), frequency (F) and the severity (S) of the hazard in the formula of $(P/F) \times S = RF$. To equate potential damage (PD) the matrix uses the formula $H + P + B = PD$ where the vulnerability of Human (H), Property (P) and Business (B) are the variables. Potential damage is then divided by the risk factor to obtain the total vulnerability of a hazard allowing a consistent ranking of the hazards.

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- Probability (P): The likely future occurrence of the hazard within a specified period of time
- Frequency (F): The record of previous occurrences of the hazard in the State
- Severity (S): The amount of likely damage, lives and property in the State
- Risk Factor (RF): The likely occurrence and damage of a hazard
- Human Vulnerability (H): Population likely to be affected by hazard
- Property Vulnerability (P): Property likely to be damaged by hazard
- Business Vulnerability (B): The likely impact of the hazard on economy
- Potential Damage (PD): The damage a hazard is likely to produce in the State
- Total Vulnerability (V): Risk Factor divided by Potential Damage

Hazard Analysis

Hazard	(P)	(F)	(S)	RF	(H)	(P)	(B)	(PD)	(V)
Severe Weather	5	4	2	2.50	1	2	1	4.00	63%
Earthquake	2	1	5	10.00	5	5	5	15.00	67%
Cyber Attack	4	3	3	4.00	1	4	4	9.00	44%
Building Fire	3	3	3	3.00	2	4	4	10.0	30%
Drought	3	3	2	2.00	1	2	2	5.00	40%
Agri-Terrorism	1	2	3	1.50	2	2	2	6.00	25%
Tornado	2	2	2	2.00	1	3	1	5.00	40%
Workplace Violence	3	2	2	3.00	3	1	4	8.00	38%
Health Hazard/Disease	3	2	3	4.50	3	1	4	8.00	56%
Landslide	2	3	1	1.33	1	3	1	5.00	27%
Flooding	3	3	3	3.00	2	2	2	6.00	50%
HazMat Release	3	4	2	1.50	3	3	2	8.00	19%
Bomb Threat	2	1	1	2.00	1	1	2	4.00	50%
Terrorist Threat	2	1	1	2.00	1	1	2	4.00	50%
Dam Failure	1	1	4	4.00	3	4	3	10.0	40%
Wildfire	5	4	3	3.75	2	2	2	6.00	63%
Explosion	1	1	5	5.00	5	5	5	15.00	33%
Volcanoes	1	1	1	1.00	1	1	1	3.00	33%
Public Safety Issues	5	5	3	3.00	4	2	2	8.00	38%
Problem Soils	5	5	1	1.00	1	1	1	3.00	33%
Radon Gas	5	5	1	1.00	1	1	1	3.00	33%
Terrorist Event - WMD	1	1	5	5.00	5	5	5	15.00	33%
Aircraft Accident	1	1	5	5.00	4	5	5	14.00	36%

Vulnerability Analysis Methodology

Civil Disturbance	1	1	3	3.00	2	2	4	8.00	38%
Nuclear Attack	1	1	5	5.00	5	5	5	15.00	33%

Scale	
Low	1
Below Average	2
Average	3
Above Average	4
High	5

Scale	
Low	1
Average	2
High	3
Extensive	4
Catastrophic	5

Hazard Consequence and Impact Analysis Matrix

Impact on Public

Based on the SHMP HIRA, there is neither record of a historical event or impacts as identified in the vulnerability analysis that would be considered catastrophic from a statewide perspective.

Historically hazard events in Utah tend to be small to moderate in size. In some instances, widespread flooding would be considered extremely significant. But, it would not necessarily rise to the level of catastrophic. A magnitude 7.0 earthquake along the Wasatch Front would be considered catastrophic.

Perhaps the hazard with the greatest impact on the public (in terms of numbers of individuals adversely affected statewide) would be an emerging disease/pandemic outbreak or a terrorism event that included a nuclear dispersion device.

Impact on Responders

Impact on responders was evaluated based on existing mutual aid and the ability to utilize the Emergency Management Assistance Compact (EMAC). Although there was an evaluation regarding the impact of responders as it relates to an emerging disease/pandemic outbreak or detonation of a nuclear explosion.

Continuity of Operations

Communities and the state continually develop and update their Continuity of Operations Plans (COOP) in the event facilities and/or agencies are impacted. State agencies also maintain disaster recovery plans which are largely IT focused. It is expected that affected agencies would exercise their COOP as appropriate. Private sector businesses are encouraged to develop business continuity plans, but they are not mandated by the state.

Properties, Facilities and Infrastructure

The SHMP has attempted to collect and create risk assessments and vulnerability analyses for the different hazards it profiled. One must take into consideration when using the data that dollar damage and facilities affected as a state, regional or local property, facilities and infrastructure should be used independently and as a comparison. One cannot conclude that an entire region

and or county would actually have an event occur where the maximum damages sustained are in all the counties in a region.

Environment

Certainly any hazard event has the potential for environmental impact. Flood events for example may result in pollution of streams and rivers due to combined sewage overflows and a tornado/wind event will disperse materials, trash and debris over a widespread area. A drought may affect the environment in a different way by drying up wetlands, and weakening/killing trees and forestlands. An earthquake and destroy and disrupt numerous parts of the environment and may take years to address and to recover. The four hazards that have a significant potential for environmental impact are: nuclear detonation/dispersion, emerging disease/pandemic outbreak, earthquake and flooding.

Economic

Because most hazards in Utah would not result in a statewide catastrophe, the economic impacts, while potentially severe, would be recoverable. Utah's economy continues to diversify. From a geographic perspective, an event that would affect the greater Salt Lake Valley would have a greater impact than would a hazard affecting other areas of the state. Similarly, an invasive species or pest that would affect a specific crop statewide, or a drought might result in a more widespread deterioration of the economic condition of the state. Finally, an event affecting Salt Lake City as it is the seat of state government could have a significant impact as centralized processing of payments to citizens for a variety of programs may be interrupted.

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Hazard Consequence and Impact Analysis Matrix

Hazard	Frequency of Occurrence	Public	Responders	COOP	Delivery Services	Property, Facilities, Infrastructure	Environment	Economics and Financial Conditions	Public Confidence in Governance
Severe Weather	4	H	H	H	H	M	M	H	*
Earthquake	2	C	H	H	H	E	M	C	*
Building Fire	3	C	H	M	L	C	H	M	*
Drought	3	L	L	L	L	L	H	H	*
Tornado	2	H	M	M	M	M	M	M	*
Landslide	2	H	M	L	M	M	H	L	*
Flooding	3	H	M	M	M	H	H	H	*
Dam Failure	1	E	M	M	M	H	H	H	*
Wildfire	5	H	H	L	M	H	C	M	*
Volcano	1	H	M	L	M	H	H	H	*
Problem Soils	5	L	L	L	L	L	M	L	*
Radon Gas	5	H	L	L	L	L	L	M	*
Technological Man-made (Overall)	5	C	C	E	E	E	H	E	*
WMD	5	H	H	H	H	H	H	H	*
Cyber-Terrorism	1	M	L	H	M	H	L	H	*
Agri-Terrorism	5	M	L	L	M	M	H	M	*
HazMat Transportation	1	H	H	M	H	H	H	M	*
HazMat Fixed Sites	1	H	H	M	H	H	H	H	*
Civil Unrest	2	M	M	M	M	M	M	H	*
West Nile Virus	1	H							*
Influenza	5	H	L	L	L	L	H	L	*

Frequency of Occurrence: Numerical Value

Annual Event	1
Every 5 years or less	2
Every 10 years or less	3
Every 30 years or less	4
Greater than 30 years	5

Vulnerability Factor: Numerical Value

Low	L
Moderate	M
High	H
Extensive	E
Catastrophic	C

* The public confidence in the entity depends on how well the State works with local emergency managers and the public before, during and after an incident. The State of Utah Division of Homeland Security runs an Emergency Managers email listserve that facilitates a strong viable working relationship between local emergency managers and UTDHS. The listserve is used as a way for emergency managers to ask questions, ask for assistance or to keep informed on going issues across the state. The State UTDHS also conducts training for locals in the four phases of emergency management, response, recovery, preparedness, and mitigation; UTDHS has received an increase of positive course feedbacks from training participants. An increase in the number of training participants is an indicator of the confidence locals have in the entity, UTDHS evaluates training needs assessment to meet the needs of the locals. UTDHS holds quarterly City, County, Directors Conference (CCDC) along with an annual Public Officials Conference (POC) both of which have had positive feedback in subject and content in helping locals.